

KAHULUI CANNERY, PLANT NO. 28, BOILER HOUSE, SHEET
METAL AND ELECTRICAL SHOPS
(California Packing Corporation)
(Maui Land & Pineapple Company Cannery)
120 Kane Street
Kahului
Maui County
Hawaii

HAER HI-79-B
HI-79-B

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

Kahului Cannery, Plant No. 28, Boiler House, Sheet Metal and Electrical Shops
(California Packing Corporation)
(Maui Land & Pineapple Company Cannery)

HAER NO. HI-79-B

Location: 120 Kane Street
Kahului, County of Maui, Hawaii

USGS 7.5 minute series topographic map
Wailuku, HI, 1997
The Universal Transverse Mercator (UTM) coordinates for this facility are
04.762810.2311620

Present Owner: Maui Land & Pineapple Company, Inc.

Present Occupant: Maui Land & Pineapple Company, Inc.

Present Use: Steam boiler and shops for pineapple cannery

Significance: The building retains its original and historic function as the steam plant and workshops for the last operating pineapple cannery in Hawaii. The pineapple industry is significant as one of Hawaii's two great agricultural industries of the 20th century, along with sugar, and was a major factor in Hawaii's economic development. The cannery is also significant in the economic history of Maui County as a major factor in the development of Kahului. The building retains its original distinct roof form of a gable roof with saw tooth monitor, and its historic roof form of triple gables.

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Date: October 2006

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of Erection: 1926

2. Engineer(s): There is little information available that is specific to the boiler house, sheet metal and electrical shops building. Most drawings are of the entire cannery complex or are specific to the cannery building. Some of the original

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drawings are signed by the Chief Engineer, who appears to be named "Philippe Bush," although the signature is difficult to decipher.

3. Original and Subsequent Owners: California Packing Corporation was the original owner in 1926. The property was subsequently purchased in 1934 by the Maui Pineapple Co., which was managed by Alexander & Baldwin (A&B). In 1969, the Cameron family purchased Maui Pineapple Co. from A&B and renamed the company Maui Land & Pineapple Company.

4. Builders, Contractors, Suppliers:

Superintendent: D.A. Buss

General Contractor: Ralph E. Woolley, Honolulu, HI.

Structural steel contractor: Blum

Fire suppression equipment: Grinnell Company of the Pacific, San Francisco, Ca.

Electricity provided by: Maui Electric Company, Maui, HI.

5. Original Plans and Construction Drawings: The original plans for the cannery buildings have various dates from late-1925 through 1926. They were produced by the California Packing Corporation. Various names and initials on drawings indicate who drew them. These include "Barnum", "H.N.A." and "F.K." Some of the drawings are signed and approved by the Chief Engineer, whose signature is difficult to decipher. The name might read "Philippe Bush."

6. Alterations and Additions: In 1929-30 the boiler house was expanded from its original 40'-6" x 56'-2" to 40'-6" x about 84'-0" in length. This was accomplished by a gable-roof addition off the south end of the building. Apparently this was done to accommodate two additional boilers. A 1940 photo (NARA 1940) and a 1945 Sanborn Fire Insurance map (Sanborn 1945) show six smokestacks in the building (originally the boiler house had four boilers and four smokestacks) protruding, in line, through the roof. Also a 1930 plan of the cannery shows six boilers in the expanded boiler house.

Between 1932 and 1945, the original blacksmith shop was demolished and a new shop building measuring about 58'-0" x 33'-0" was constructed about 8'-0" from the west side of the boiler house, between it and the office building. This shop building contained the carpenter and blacksmith shops (Sanborn 1945).

Between 1945 and 1947 this blacksmith and carpenter shop building was expanded off its south end from its original length of about 33'-0" to about 84'-0" and the building's uses were given over to the tinsmith, welding and blacksmith shop and the electrical and automotive shop. This gave the shop building the same approximate length as the boiler house building. Maui Pineapple Co. plot plan drawings from 1947 and 1957 show that although the two buildings were separate (boiler house and shops building), the approximate 8'-0" wide passageway between them was roofed over. This was accomplished by extending the west slope of the boiler house roof out to join the eave of the tinsmith, welding, and blacksmith shop.

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At an unknown date after 1947 the glazing was removed from the saw tooth monitor of the boiler house (ML&P 1947). The current boiler house building has metal mesh in the monitor openings. In 1954, two boilers built by the Foster Wheeler Corporation of New York were installed. These are the two 250 psi boilers that are currently in use in the boiler house. Two additional boilers were installed in 1957, one manufactured by Foster Wheeler and one by the Babcock Wilcox Company. These boilers remain in the boiler house but are inoperable.

By the mid 1960s the boiler house contained only 3 smokestacks (ML&P ca. 1965). This was most likely accompanied by a reduction in the number of useable boilers. Between 1975 and 1982 the remaining three smokestacks were taken down and all the remaining boilers were vented through a new, common stack that was installed at the north corner of the building. This involved removing an approximate 15'-0" x 15'-0" section of the building at the corner and constructing a metal I-beam framework to support the metal stack.

In 1980 two additional boilers were installed in the adjacent Dryer House/Feed Storage Building. The manufacturer of these boilers could not be determined. One is a 160 psi boiler that is inoperable and the other is a 350 psi boiler which continues to provide steam for the cannery.

- B. Historical Context: For more historical information see historical narrative report; Kahului Cannery, Plant No. 28, HAER No. HI-79, from which the following information is taken. See also, Kahului Cannery, Plant No. 28, Cannery Building and Dryer House/ Feed Storage Building, HAER No. HI-79-A, Kahului Cannery, Plant No. 28, Pump House, HAER No. HI-79-C and Kahului Cannery, Quonset Hut Grouping HAER No. HI-79-D.

The Kahului cannery was built by the California Packing Corporation (CPC) as "Plant No. 28" in 1926 to process fruit from two Maui growers, Haleakala Pineapple Company and Maui Agricultural Company. Plans were prepared by CPC and construction began in December, 1925. The original building had a rectangular footprint which measured 40'-6" x 57'-2" and housed four boilers. The boilers were installed in position (transverse to the long axis of the building) before the building was erected around them (ML&P May 5, 1926). The cannery began operation on June 22, 1926 with four processing lines running (*Maui News* June 23, 1926).

The original boiler house, which was later altered and expanded, had a frame of steel I-beam columns and beams on bents spaced 14'-0" that was covered with corrugated metal siding. The gable roof had a saw tooth monitor facing the west that ran the entire length of the ridge. The monitor was glazed with twenty-light metal frame windows, some with six-light pivot sections. The lights were 12" wide x 1'-6" high. The four smoke stacks (one for each boiler) pierced the east slope of the roof and rose about 22'-0" above the roof.

The steam produced by the boiler house was used in the canning operation to heat the sealed cans of fruit, and also in the dryer house/feed storage building to

evaporate moisture from the bran to convert it to animal feed. The steam was piped to the cannery and to the dryer house buildings via overhead steam pipes which spanned the passages between the buildings.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character: The building has a utilitarian cannery design. The boiler house section has a gable roof with a saw tooth monitor for ventilation. The sheet metal and electrical shops each have gable roofs.

2. Condition of Fabric: Fair

B. Description of Exterior:

1. Overall Dimensions: The building has a rectangular footprint with overall measurements of about 104'-0" x 84'-0". The height to the eaves is 16'-2", the roof ridge is about 23'-0" high and the top of the monitor is about 28'-0" above grade.
2. Foundations: Concrete footings and concrete slab-on-grade.
3. Walls: Steel-framed walls with I-beam columns and girders and horizontal members of steel channels covered with corrugated metal siding. The east side of the building (boiler house) is open, with no siding or horizontal members.
4. Structural System, Framing: Steel I-beam columns and girders. Fink roof trusses of light gauge steel construction on bents spaced 14'-0" on center.
5. Porches, stoops, balconies, porticoes, bulkheads: The building has two sections of corrugated metal pent roof; one protects most of the open east side with an overhang of about 6'-0". The second protects a portion of the south side at the sheet metal and electrical shops with an overhang of about 4'-0".
6. Chimneys: The building has one large metal chimney about 4'-0" in diameter which is supported at its lower portion by a framework of steel I-beams. This framework extends up about 32'-0" above grade and the chimney reaches upward, unsupported, about 25'-0" above it.
7. Openings:
 - a. Doorways and doors: The sheet metal and electrical shop portions of the building have sliding doors at their south gable ends. The electrical shop door is covered with corrugated metal siding, and the sheet metal shop has a combination door with corrugated metal siding in the lower portion and field fence with approximate 4" mesh in the top half. The north end of the electrical shop

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has a combination sliding door with corrugated siding in its lower half and field fence with approximate 4" mesh in its top half. The north end of the sheet metal shop has an opening filled with vertical pieces of opaque heavy plastic. At the north end of the boiler house section of the building there is a flush wood door with a large single light.

b. Windows and shutters: The building has metal mesh filling the openings in the saw tooth monitor. The north end of the electrical shop has twelve-light metal frame window and a sixteen-light metal frame window with an eight-light pivot section. Both windows have obscure glass lights. The west side wall of the electrical shop has field fence with approximate 4" mesh in its upper portion.

8. Roof:

a. Shape, Covering: The roof of the building is triple gable with the ridges oriented approximately north-south. The eastern ridge, over the boiler house portion of the building, has a saw tooth monitor (about 56'-0" long) at its northern portion which faces west. The monitor has screened openings. The two ridges of the sheet metal and electrical shop portions and the south end of the boiler house ridge (the area of the roof without the monitor) have longitudinal ridge vents. The south gable of the sheet metal shop has a wood fixed louver vent. The roof of the building is covered with corrugated metal panels. The two gable roofs over the sheet metal and electrical shops have sections of translucent fiberglass panels.

b. Roof Construction: Fink trusses of light-gauge steel construction on steel I-beam columns in bents that are spaced 14'-0" on center. The saw tooth monitor of the east gable is formed by an extension of the trusses top chords upwards past the gable ridge. The roof has steel, channel-shape purlins.

c. Eaves: The building has eaves that project about 1'-0" at the gable ends and at the side walls. The monitor has an awning of corrugated panels which project about 3'-6" and protect the opening from the weather.

C. Description of Interior:

1. Floor Plan: The building was built in three side-by-side sections. The boiler house section (measuring about 48'-0" wide x 84'-0" long) contains the boilers which provide steam for cannery operations. The boilers and associated machinery and controls fill this section of the building. The open east side of the building provides access to the front of the boilers and their control panels. There is a narrow passageway to the rear of the boilers, and a steel stairway and catwalk system which provides access to their top portions.

Both of the other two sections (sheet metal shop and electrical shop – each measuring about 28'-0" wide x 84'-0" long) of the building have rectangular floor plans that are filled with equipment, storage shelves, and work tables that leave an aisle running down the center of each section. The sections are separated from each other and from the boiler house section, by walls of corrugated metal siding.

2. Floor Finish: The floor in all sections of the building is concrete.
3. Wall and Ceiling Finish: Walls are corrugated metal siding. The west wall of the electrical shop has field fence with approximate 4" mesh in its upper portion. Ceilings in the building are the underside of the corrugated metal or translucent fiberglass roof covering.
4. Decorative Features: The boiler house, sheet metal and electrical shops building does not contain decorative features; it is purely utilitarian in design.
5. Lighting Fixtures: The building has various light fixtures. At the pent roof along the south side are suspended incandescent bulbs shaded by round enameled-metal shades that are white on the underside and green on the upper side. Inside the building are suspended fluorescent tube fixtures.
6. Mechanical:
 - a. Heating: The building is not heated.
 - b. Fuel: Oil was the original fuel to the boilers.
 - c. Plumbing: Automatic sprinklers. The boiler house has two operational boilers which were installed in 1954. These are 250 psi units manufactured by the Foster-Wheeler Corporation of New York. There are also two inoperable boilers which were installed in 1957. One was manufactured by Foster-Wheeler and the other by Babcock Wilcox Company of Barberton Ohio. Overhead piping at the southeast corner and the northeast corner of the boiler house carries steam to the cannery building and the dryer house building.
 - d. Water supply: From 6" and 4" city water mains as well as from on-site well. Water was originally pumped from the well by an Allis Chalmers electrical centrifugal pump with a capacity of 1000 gallons per minute. 100,000 gallon steel water tank, 100 feet tall (demolished).
 - e. Electric: Electricity for lights and power was originally provided by Maui Electric Company.
 - f. Misc: The Boiler House contains a valve with the cast text "Crane Steel" (maker's mark) and a swastika. Some cannery employees have remarked on this symbol, and assumed that the steel valve was purchased from Germany. This is not the case. The valve was produced by Crane Co., an American company that was founded in 1855 and had used the symbol as their company logo prior to the adoption of the symbol by the Nazis. Sometime after the Nazis adopted use of the swastika, Crane Co. stopped using the symbol because of its obvious negative associations.

PART III. SOURCES OF INFORMATION

A. Architectural Drawings:

All drawings are located in the archival records of Maui Land & Pineapple Company (ML&P) Company History.

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Construction drawings by the California Packing Corporation are dated January 1925 through November 1925. Machine and mechanical equipment layout drawings by the California Packing Corporation are dated January 1926 through December 1926. A plat plan drawing by the California Packing Corporation is dated October 1926.

An underground plumbing drawing for the fire protection system by the Grinnell Company, San Francisco, CA is dated March, 1926.

A drawing of Factory Steel Windows and Operators by the Soule Steel Co., Steel Door and Window Division, San Francisco CA (Theo H. Davies Ltd, contractor) is dated May 1938.

B. Early Views:

Documents, photographs, and drawings are located in the archival records of Maui Land & Pineapple Company (ML&P) Company History.

C. Bibliography:

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_____. Photograph from folder "Company History Photographs, Donated photos A." May 5, 1926.

_____. Photograph from folder "Company History Photographs, Donated photos A." June 20, 1926.

_____. Plan "Plat Plan Plant No. 28 revised Oct 19, 1928" October 1926.

_____. Plan "California Packing Corporation Plant No. 28 Pineapple Cannery" January 1930.

_____. Plan "California Packing Corporation, Kahului T.H." December 1932.

_____. Photograph from Volume I Binder I ADT: 49-19/Cambra. 1947.

_____. Drawing "Factory & Ground General Plot Plan" May 6, 1947.

_____. Drawing "Factory & Ground General Plot Plan" May 13, 1957.

_____. Photograph ADJ: 43-1/ MLP ca. 1965.

_____. Plan "Kahului Plant." June 9, 1977.

Maui News. "To Ship Pines To Cannery in Honolulu, Plan." January 18, 1924.

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_____. "Contract Awarded For Construction Cannery At Kahului." December 16, 1925, p. 1.

_____. "Site Of Cannery Near Kahului Is Now Busy Place." December 30, 1925, p. 1.

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_____. "C.P.C. Cannery Is Most Modern In Territory" December 4, 1926, Sec. 7 p. 4.

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PART IV: PROJECT INFORMATION

Photo documentation and recordation of this facility was undertaken because Maui Land & Pineapple Company (ML&P) currently plans to demolish four buildings in whole or in part on the cannery complex as part of ML&P's MC2 ("Multi Client, Multi-Commodity Center") redevelopment plan. These include a 1,665 square foot portion of the historic cannery building, full demolition of a 6,400 square foot Engineering Office built in 1926 (but significantly altered and added to, and as such not eligible for the National Register of Historic Places, or worthy of HABS documentation), a 21,000 square foot Repair Shop built in 1999 (similarly not Eligible), and an 890 square foot Maintenance Shed built in the early 1970s (also not Eligible). It is possible that other unplanned development projects in the future could include the demolition of additional historic buildings in the cannery complex. The cannery site is located within the County of Maui's Special Management Area (SMA). As part of the SMA permitting process, the County of Maui Department of Planning evaluates "impacts to the environment, historic and cultural resources, drainage and impervious surface cover, public views of the ocean, public access to beaches and

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shoreline, and the cumulative impacts of development" (County of Maui Department of Planning, 2005). Upon reviewing the proposed demolition, the Department of Planning issued the approval for the SMA. The Cultural Resources Commission, serving under the County of Maui Department of Planning, recommended that HABS documentation occur. Accordingly, this report and four others for the site were written to satisfy this requirement and serve as mitigation for the proposed demolition. (This project was not subject to Section 106 review.)

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Location map. From USGS 7.5 minute series topographic map, Wailuku, HI, 1997. Reduced, not to scale.

